

## Temporary Barriers, Attenuators or Sand Barrel 20220603

Diary Number: \_\_\_\_\_ Inspector Name: \_\_\_\_\_

TRACS Number: \_\_\_\_\_ Date: \_\_\_\_\_

### Division VII: Traffic Control Facilities

Title: Temporary Barriers, Attenuators or Sand Barrels

<b>Field Name</b>
Route:
Stations:
Offset
Elevation:
Traffic Control Coordinator
Certified Traffic Control Supervisor:
Type of Attenuator Used:
NCHRP Report or MASH Report (for Attenuators):

Attribute Numbers	Compliance	Narrative	Reference
0.		<p>All stakeholders have participated in the pre-activity meeting (which can be combined with other pre-activity).</p> <p><u>Standard Specifications</u> 701- 3.08 Page 705  <u>Standard Specifications</u> Sub-section 701-3.01 Page 698</p>	<p>Standard Specifications 2021 701-3.01</p>
1.		<p>The Contractor has provided to the Engineer, the name of their employee, who is responsible for implementing, monitoring, and altering, as necessary, the traffic control plan (<b>Traffic Control Coordinator</b>).</p> <p><u>Standard Specifications</u> Sub-section 701-3.01 Page 698</p>	<p>Standard Specifications 2021 701-1</p>
2.		<p>The Contractor has provided ADOT with the name of the employee, or licensed Professional Engineer registered in the State of Arizona that has completed the ATSSA or the IMSA Traffic Control Supervisor "Certification" (Certification needs to be valid throughout the duration of the project).</p> <p><u>Special Provisions</u> 108.03 (108PRCN, 5/3/16)  <u>Standard Specifications</u> 701-1(A) and 701-1(B) Page 693  <u>Manual on Uniform Traffic Control Devices</u> 6C.01 Line 03 Page 551</p>	<p>Standard Specifications 2021 701-1</p>

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3.	<p>The Contractor has supplied the ADOT field office with a letter certifying that the traffic control devices meet NCHRP Report 350 criteria or M.A.S.H. (Manual for Assessing Safety Hardware) requirements.</p> <p><u>NCHRP Report 350</u>  <u>Traffic Control Design Guideline Page 5</u>  <u>Manual for Assessing Safety Hardware (M.A.S.H.)</u>  <u>Standard Specifications 2021 Sub-Section 701- 2.01 (B) (1)</u>  <u>Page 694</u></p>	Standard Specifications 2021 701- 2.01 (B)(1)
4.	<p>The Contractor has provided a Certificate of Compliance letter, certifying that the <b>Temporary Concrete Barrier (TCB)</b> used on the project conforms to Signing and Marking Standard Drawing C-3 (Provided by the Contractor at the Pre-construction Conference).</p> <p><u>Standard Specifications Subsection 701-2.03 Page 696</u>  <u>Standard Specifications Section 106.05 Page 89</u>  <u>Signing and Marking Standard Drawings C-3</u>  <a href="https://azdot.gov/node/5286">https://azdot.gov/node/5286</a></p>	Standard Specifications 2021 701-2.03
5.	<p>For <b>Steel Temporary Barrier (TSB)</b>, When used, they shall be in accordance with the manufacturer's recommendations. {TSB but have much higher dynamic deflections when not pinned.}</p> <p><u>ADOT Temporary Traffic Control Design Guidelines Page 8</u></p>	Temporary Traffic Control Design Guidelines
6.	<p>When Temporary Concrete Barrier or Steel Temporary Barrier needs to be pinned to the Bridge Deck, the Contractor has submitted a drawing on how it will be pinned for approval.</p> <p>Standard Specifications 701- 2.03 Page 696          Signing and Marking Standard Drawings C-3  <a href="https://azdot.gov/node/5286">https://azdot.gov/node/5286</a></p>	Standard Specifications 2021 701-2.03
7.	<p><b>Pre-filled barrels</b> delivered to the project, have been inspected by the Department in advance and have a Department-furnished unique identifier that is permanently affixed to the barrel corresponding to a production lot(s). Pre-filled barrels not having a Department-furnished unique identifier will not be accepted.</p> <p><u>Standard Specifications 701-2.04 Page 696</u>  <u>Standard Specifications 702-2.04 Page 722</u></p>	Standard Specifications 2021 701-2.04
8.	<p>There is a <b>letter certifying that the correct amount of sand</b> is in each barrel, the sand has a dry unit weight of 90 to 110 Lbs. per cubic foot, sand contains less than 2% moisture by weight, and the sand meets the required gradation (no rocks or debris).</p> <p><u>Standard Specifications 701-2.04 Page 696</u>  <u>Standard Specifications Section 106.05 Page 89</u>  <u>Standard Specifications 702-2.03 Page 723</u></p>	Standard Specifications 2021 701-2.04
9.	<p>For <b>Elevation above 3,000</b> feet, the sand has Five percent rock salt (by weight) mixed with sand (documentation on file).</p> <p><u>Standard Specifications 701-2.04 Page 696</u>  <u>Standard Specifications Subsection 702-2.03 Page 722</u></p>	Standard Specifications 2021 701-2.04
10.	<p><b>Certifications</b> contain the Name and Model of the tested traffic control devices, detailed drawings/product literature, and test conditions the devices passed.</p> <p><u>Standard Specifications Sub-section 701-2.01 (B) (1) Page 694</u></p>	Standard Specifications 2021 701-2.01 (B)(1)

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11.	<p>The <b>Approved Traffic Control Plan</b> (TCP) has the Temporary Concrete Barrier, Temporary Attenuator, and or Glare Screen noted on it.</p> <p><u>Traffic Control Plan Sheets</u>  <u>Standard Specifications 2021 Sub-Section 701- 2.01 (B) (1) Page 694</u></p>	Standard Specifications 2021 701- 2.01 (B) (1)
12.	<p><b>Temporary Concrete Barriers</b> are fastened as shown on “Standard Drawings C-3” to form a smooth, uniform appearance (no kinks in alignment).</p> <p><u>Signing and Marking Standard Drawings C-3</u>  <a href="https://azdot.gov/node/5286">https://azdot.gov/node/5286</a></p>	Signing and Marking Standard Drawings C-3
13.	<p><b>Temporary Concrete Barriers Galvanize Pin</b> meets either Connector Pin details of 2-feet 5-inches plus or minus 1/8-inch from tip to the washer, and the shaft is 1-inch.</p> <p><u>Signing and Marking Standard Drawings C-3 Pin Note 2 and Note 3</u>  <a href="https://azdot.gov/node/5286">https://azdot.gov/node/5286</a></p>	Signing and Marking Standard Drawings C-3
14.	<p>The <b>Temporary Concrete Barrier</b> is in good condition and has no large spalls or exposed rebar. None on the Public Traffic side.</p> <p><u>Quality Guidelines for Temporary Traffic Control Devices</u>  <a href="https://adotnet.az.gov/content/quality-guidelines-temporary-traffic-control-devices">https://adotnet.az.gov/content/quality-guidelines-temporary-traffic-control-devices</a></p>	Quality Guidelines for Temporary Traffic Control Devices
15.	<p><b>Temporary Concrete Barrier</b> ends are flared outside of the clear zone (if Sand Barrels or Water Fill Attenuator are used, mark it as “N/A”),</p> <p><u>ADOT Temporary Traffic Control Design Guidelines Page 7</u>  <u>Signing and Marking Standard Drawings C-4</u>  <a href="https://azdot.gov/node/5286">https://azdot.gov/node/5286</a></p>	ADOT Temporary Traffic Control Design Guidelines
16.	<p>The <b>Temporary Concrete Barrier</b>, for setup off the roadway, earthen material, or aggregate base shall be placed at a 10:1 or flatter slope under the TCB and between the TCB and the roadway.</p> <p><u>ADOT Temporary Traffic Control Design Guidelines Page 7</u></p>	Temporary Traffic Control Design Guidelines
17.	<p>The <b>Temporary Concrete Barrier</b>, the flare rate should be no steeper than 8:1. Flare rates between 8:1 and 20:1 are shown in Table 5-9 of the AASHTO Roadside Design Guide. {Existing speed limits are a consideration in the design of TCB flare rates.}</p> <p><u>ADOT Temporary Traffic Control Design Guidelines Page 7</u>  <u>Signing and Marking Standard Drawings C-4</u>  <a href="https://azdot.gov/node/5286">https://azdot.gov/node/5286</a></p>	Temporary Traffic Control Design Guidelines
18.	<p>The <b>Temporary Concrete Barrier</b> has a minimum of 2 feet of lateral clear space between the work zone side of the TCB and the work area/drop off or the hazard that is being shielded.</p> <p><u>ADOT Temporary Traffic Control Design Guidelines Page 7</u></p>	Temporary Traffic Control Design Guidelines

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19.	<p>When <b>Temporary Concrete Barrier</b> does not have a minimum 2-foot lateral movement (deflections) between the edged of the TCB to the drop-off, it is pinned to the Roadway or Bridge Deck.</p> <p><u>Signing and Marking Standard Drawings C-3</u>  <a href="https://azdot.gov/node/5286">https://azdot.gov/node/5286</a></p>	Signing and Marking Standard Drawings C-3
20.	<p><b>Barrier Markers</b> are installed on the barrier and spaced at a maximum of 20 feet with the correct color to match roadway striping (on curves the spacing is closer) and a height of 26 inches or on Top.</p> <p><u>Signing and Marking Standard Drawings C--3</u>  <u>Signing and Marking Standard Drawings M-33 Note 8</u>  <u>Signing and Marking Standard Drawings M-32</u>  <a href="https://azdot.gov/node/5286">https://azdot.gov/node/5286</a>  <u>ADOT Temporary Traffic Control Design Guidelines Page 7</u></p>	Signing and Marking Standard Drawings C-3
21.	<p>When required, a <b>Temporary Glare Screen</b> is installed per the Manufacturer's Recommendations. {Expanded mesh Glare screens are no longer used.}</p> <p><u>ADOT Temporary Traffic Control Design Guidelines Page 7</u></p>	Project Plan Sheets
22.	<p><b>Sand Barrel</b> Crash cushions are placed on level pads per plan.</p> <p><u>Standard Specifications Sub-section 702-3 Page 724</u>  <u>Signing and Marking Standard Drawings C-1 Note 2</u>  <u>ADOT Temporary Traffic Control Design Guidelines Page 10</u></p>	Standard Specifications 2021 702-3
23.	<p>The <b>Sand Barrel</b> crash cushion Placement, Angles, and Spacing is in accordance with the Manufacturer's Recommendations (at the originally posted speed or before any drop of speeds).</p> <p><u>Signing and Marking Standard Drawings C-1 Note 5</u>  <a href="https://azdot.gov/node/5286">https://azdot.gov/node/5286</a>  <u>Standard Specifications Sub-section 702-3 Page 724</u></p>	Standard Specifications 2021 702-3
24.	<p>The <b>Sand Barrel</b> crash cushion has a four-inch-wide yellow reflective sheeting chevron on the lead barrel(s) per Standard Drawing M-35. {Design "A" or "B" or "C" or "D"}</p> <p><u>Signing and Marking Standard Drawings M-35</u>  <a href="https://azdot.gov/node/5286">https://azdot.gov/node/5286</a></p>	Signing and Marking Standard Drawings M-35
25.	<p>The <b>Sand Barrel</b> crash cushions are not damaged and have lids on them.</p> <p><u>Standard Specifications Sub-section 701-3 04 Page 701</u></p>	Standard Specifications 2021 702-3
26.	<p>The <b>Sand Barrel</b> crash cushion barrels that are Damaged are Replaced within 36 hours.</p> <p><u>Standard Specifications Subsection 701-3.04 Page 701</u></p>	Standard Specifications 2021 701-3.04
27.	<p>The correct numbers of <b>Water Filled Attenuators</b> are placed per the Manufacturer's Recommendations (at the originally posted speed or before any drop of speeds).</p> <p><u>Standard Specifications Subsection 701-3.04 Page 701</u></p>	Standard Specifications 2021 701-3.04

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28.	<p>The <b>Water Filled Attenuators</b> are placed on level pads per plan.</p> <p><u>ADOT Temporary Traffic Control Design Guidelines Page 10</u></p>	ADOT Temporary Traffic Control Design Guidelines
29.	<p>For <b>Water Filled Attenuators</b> has the correct amount of water is being used per the Manufacturer's Recommendations.</p> <p>N.C.H.R.P. 350 Report or M.A.S.H .Report</p>	Manufacturer's Recommendations
30.	<p>For <b>Water Filled Attenuators</b>, has a four-inch-wide yellow reflective sheeting chevron on the lead barrel\unit per Standard Drawing M-35. {Design "A" or "B" or "C"}</p> <p><u>Signing and Marking Standard Drawings M-35</u></p>	Signing and Marking Standard Drawings M-35
31.	<p>For <b>Water Filled Attenuators</b> used during freezing weather, the water is treated per the manufacturer's recommendations.</p> <p><u>Manufacturer's Recommendations</u></p>	Manufacturer's Recommendations
32.	<p>For all other MASH or NCHRP Attenuators, they were installed per the manufacturer's recommendations.</p> <p>N.C.H.R.P. 350 Report or M.A.S.H .Report</p> <p><u>Manufacturer's Recommendations</u></p>	Manufacturer's Recommendations
33.	<p><b>Temporary Concrete Barriers</b> and Barrier Attenuators are placed per the approved plan.</p> <p><u>Standard Specifications Subsection 702-3 Page 724</u></p>	Standard Specifications 2021 702-3
34.	<p>If Vertical panels, Ultra Panels, or Type II devices are specified in front of barrel arrays or other in-place attenuation devices, lights are in working order and visible from a distance of 3,000 feet.</p> <p><u>Manual on Uniform Traffic Control Devices 6F.83 Line 10 Page 615</u></p> <p><u>Standard Specifications Section 107.09 Page 102</u></p> <p><u>Project Plan Sheets or Approved Traffic Control Plan</u></p>	Project Plan Detail Sheets
35.	<p>Quantlist Minimum Frequency is being followed, one per week.</p> <p><a href="https://azdot.gov/node/5338">https://azdot.gov/node/5338</a></p>	Construction Bulletin 07-01